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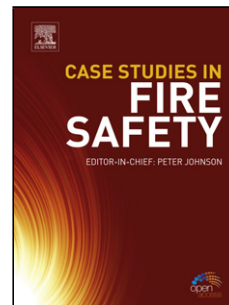
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**Understanding the corrosion inhibition of carbon steel and of copper in sulphuric acid medium by amino acids using electrochemical techniques allied to the molecular modelling methods**

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**Highlights**

- Corrosion inhibition of carbon steel and of copper by the amino acids was studied.
- Inhibition efficiencies were experimentally achieved by electrochemical impedance.
- DFT and Monte Carlo methods allowed correlating molecular properties with inhibition efficiency
- The corrosion inhibition followed the electron donation the electron-back donations process

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